

form a bundle[, said ends of the rectangular tubes and said tube bottoms forming a weld joint therebetween];

1 a sheet metal jacket arranged around said bundle and attached to said tube bottoms, said sheet metal jacket being provided with a coolant inlet and a coolant outlet to allow a liquid coolant to flow around said rectangular tubes in said sheet metal jacket; and

connections attached to said tube bottoms, to ends of said sheet metal jacket, or to both said tube bottoms and ends of said sheet metal jacket and configured for attachment to an exhaust pipe communicated with the exhaust gas from the internal-combustion engine, each of said connections defining a central opening [which communicates] for communicating said rectangular tubes with the exhaust pipe.

20. (Twice Amended) A heat exchanger for cooling exhaust gas of an internal-combustion engine, comprising:

2 a plurality of tubes for guiding exhaust gas, said tubes comprising tube walls;

a plurality of lugs arranged in pairs in said tubes diagonally to a flow direction of the exhaust gas, said lugs

being one of (a) directly attached to said tube walls and (b) integrally formed from said tube walls;

first and second [preformed] latticed tube bottoms, each tube bottom defining a plurality of openings corresponding to an outer periphery of respective of said tubes, first and second axial ends of each of said tubes being arranged in respective of said openings in said first and second tube bottoms such that said tube bottoms support said tubes substantially parallel to one another and spaced-apart from one another in a bundle[, said ends of the tubes and said tube bottoms forming a weld joint therebetween];

a sheet metal jacket concentrically surrounding said bundle and attached to said tube bottoms, said sheet metal jacket and said tube bottoms defining a chamber, said sheet metal jacket being provided with a coolant inlet and a coolant outlet to allow a liquid coolant to enter said chamber, flow around an exterior surface of said tubes in said chamber, and exit said chamber; and

connections attached to said tube bottoms, to ends of said sheet metal jacket, or to both said tube bottoms and ends of said sheet metal jacket and configured for attachment to an exhaust pipe communicated with the exhaust gas from the internal-

12 combustion engine, each of said connections defining an opening [which communicates] ~~for communicating~~ an interior of said tubes with an interior of said exhaust pipe.

7  
Please cancel claim 21 without prejudice or disclaimer.

13 Sub 51  
22. (Twice Amended) A method of manufacturing a heat exchanger for cooling exhaust gas of an internal-combustion engine, said method comprising the steps of:

providing a plurality of rectangular tubes for guiding exhaust gas;

[attaching] ~~arranging~~ a plurality of lugs [to] in said rectangular tubes diagonally to a flow direction of the exhaust gas, said lugs being arranged in pairs, said lugs being one of (a) directly attached to said tube walls and (b) integrally formed from said tube walls;

providing first and second [preformed] latticed tube bottoms;

welding ends of said rectangular tubes to said latticed tube bottoms such that said rectangular tubes form a bundle;

Sub  
D1  
Went

attaching a sheet metal jacket to said tube bottoms and around said bundle;

providing said sheet metal jacket with a coolant inlet and a coolant outlet to allow a liquid coolant to flow around said rectangular tubes in said sheet metal jacket; and

attaching connections to said tube bottoms, to ends of said sheet metal jacket, or to both said tube bottoms and ends of said sheet metal jacket, said connections being configured for attachment to an exhaust pipe communicated with the exhaust gas from the internal-combustion engine, each said connection defining a central opening [which communicates] for communicating said rectangular tubes with the exhaust pipe.

Please add the following new claims (23-38):

-- 23. A heat exchanger according to Claim 1, wherein the lugs are molded out of the tube walls by deep drawing and pressing-together.

24. A heat exchanger according to Claim 9, wherein the spacing elements are integrally formed from said tube walls.

04  
25. A heat exchanger according to Claim 24, wherein each of said spacing elements engages a non-spacing element portion of the tube wall of an adjacent tube.

26. A heat exchanger according to Claim 20, wherein the lugs and the tube walls form a weld joint therebetween.

27. A heat exchanger according to Claim 20, wherein the lugs are molded out of the tube walls by deep drawing and pressing-together.

28. A heat exchanger according to Claim 20, wherein the tubes are provided with spacing elements facing respective adjacent ones of said tubes.

29. A heat exchanger according to Claim 28, wherein the spacing elements are integrally formed from said tube walls.

30. A heat exchanger according to Claim 29, wherein each of said spacing elements engages a non-spacing element portion of the tube wall of an adjacent tube.

Sub 31. A method according to Claim 22, wherein in said arranging step the lugs are welded to the tube walls.

32. A method according to Claim 22, wherein in said arranging step the lugs are molded out of the tube walls by deep drawing and pressing-together.

33. A method according to Claim 22, further comprising providing the tubes with spacing elements facing respective adjacent ones of said tubes.

34. A method according to Claim 33, wherein the spacing elements are integrally formed from said tube walls.

35. A method according to Claim 34, further comprising arranging the tubes such that each of said spacing elements engages a non-spacing element portion of the tube wall of an adjacent tube.

36. A heat exchanger according to Claim 1, wherein said latticed tube bottoms are preformed, and wherein said ends of the

rectangular tubes and said tube bottoms form a weld joint therebetween.

04 37. A heat exchanger according to Claim 20, wherein said latticed tube bottoms are preformed, and wherein said ends of the tubes and said tube bottoms form a weld joint therebetween.

Sub 38. A method according to Claim 22, wherein said latticed tube bottoms are preformed. --

---